

*\* Great Job...  
very descriptive*

### Experiment Procedure

- 1) Find the mass of the car and record in the data table.
- 2) Setup the ramp and position the block at the bottom to be ready for the experiment.
- 3) Measure the starting point of 80cm on the ramp and release the car from that measurement.
- 4) Once it has rolled down the ramp and has hit the block, measure the distance of the block from the bottom of the ramp and record it in the data table.
- 5) Do this two other times while recording each trial.
- 6) You will do this for both 90cm and 100cm while filling out the data table.
- 7) Measure the mass of 8 washers and record the total of the washers and the mass of the car together.
- 8) Put the washers into the car and release from 80cm, 90cm, and 100cm on the ramp, recording the distance the block traveled every time.
- 9) Do this 3 times for each measurement in the table. (80cm, 90cm, 100cm)
- 10) Then find the averages and record the information in the data table.

- 1) Identify the variable(s) you are testing during your experiment.  
By adding weights to the car during the experiment this will be a variable.  
Depending on where we start on the ramp will cause the ramp to also become a variable because it changes.

- 2) Draw a chart or data table to record the results of your investigation.

<u>Ramp length</u>	<u>Mass of Car</u>	<u>Trial 1</u>	<u>Trial 2</u>	<u>Trial 3</u>	<u>Avg block length</u>
80cm	152.8g	52cm	47cm	45cm	48cm
90cm	152.8g	60cm	64cm	51cm	58.3cm
100cm	152.8g	62cm	54cm	80cm	65.3cm
80cm	218.8g	48cm	87cm	74cm	55cm
90cm	218.8g	75cm	69cm	98cm	80.7cm
100cm	218.8g	102cm	87cm	81cm	90cm

*\* Perfect table \**

- 1) What effect did increased mass have on the distance the barrier moved?  
The effect of the increased mass of the car caused the average distance of the barrier to move farther from the ramp.
- 2) What effect did increased velocity have on the distance the barrier moved?  
The effect of increased velocity caused the car to move the barrier farther from the ramp because of the increase in the ramp's length.
- 3) Under what conditions did the barrier move the farthest?